



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,319	03/31/2006	Yuanhao Sun	42P21030	5553
45209	7590	12/22/2009	EXAMINER	
INTEL/BSTZ			BENGZON, OREG C	
BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP			ART UNIT	
1279 OAKMEAD PARKWAY			PAPER NUMBER	
SUNNYVALE, CA 94085-4040			2444	
			MAIL DATE	DELIVERY MODE
			12/22/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/574,319

Applicant(s)

SUN ET AL.

Examiner

GREG BENZON

Art Unit

2444

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 October 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/CD)
Paper No(s)/Mail Date 10/13/2009
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This application has been examined. Claims 1-18 are pending.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/13/2009 has been entered.

Response to Arguments

Applicant's arguments filed 10/13/2009 have been fully considered but they are not persuasive.

The USC 101 rejection for Claims 7-12, 17 is withdrawn. As per amendment to Applicant Specification Page 2 the computer-readable medium is a computer storage medium.

The Applicant presents the following argument(s) [*in italics*]:

... neither Marchand nor Bailey, alone or in combination, can teach or suggest the use of two protocols in the manner recited in the claims.

The Examiner respectfully disagrees with the Applicant.

The Examiner notes that Marchand Paragraph 53 disclosed splitting the multicast transfer and the recovery transfer phases so that different protocols may be used for each phase. For the initial transfer phase Marchand Paragraph 60 disclosed existing broadcast/multicast protocol which cannot guarantee that all nodes will contain copy of the replicated file and is a non-reliable multicast transmission protocol. The second phase is the recovery transfer phase which is performed using the symmetric-connectionless file transfer protocol by Marchand which is a reliable multicast protocol.

Marchand disclosed (re. Claim 1) multicasting the plurality of packets to multiple client devices including the first client device (Marchand- Paragraph 50-Paragraph 53, Paragraph 57) *using a first transmission protocol that comprises a non-reliable multi-cast transmission protocol (Marchand-Paragraph 24, Paragraph 60 existing broadcast/multicast protocol which cannot guarantee that all nodes will contain copy of the replicated file)* and requesting, when the first client has completed download of the file, using a reliable protocol with a second client device from the multiple client devices packets not received by the second client device (Marchand- Paragraph 50-Paragraph 53, Paragraph 57, Paragraph 64) wherein the request utilizes a reliable protocol. (Marchand- Paragraph 55, symmetric-connectionless file transfer protocol)

Marchand Paragraph 55 disclosed sending a request using a multicasting

protocol which is a reliable protocol for determining which file transfers occurred while the requesting slave process was non-operational.

Priority

This application claims benefits of priority from PCT Application PCT/CN2005/000264 filed March 7, 2005.

The effective date of the claims described in this application is March 7, 2005.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 10/13/2009 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5,7-11,13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bailey (US Patent 6185623) further in view of Marchand (US Publication 2008/0168157).

Bailey disclosed (re. Claim 1) a method comprising: receiving a request from a first client device to download a file to be transmitted as a plurality of packets of data from a server device; (Bailey-Column 3 Lines 25-45, Column 4 Lines 5-15)

However Bailey did not disclose (re. Claim 1) multicasting the plurality of packets to multiple client devices *using a first transmission protocol that comprises a non-reliable multi-cast transmission protocol* and requesting, when the first client has completed download of the file, from the server device with a second client device from the multiple client devices, the packets not received by the second client device wherein the request utilizes a second transmission protocol that comprises a reliable protocol.

The Examiner notes that Marchand Paragraph 53 disclosed splitting the multicast transfer and the recovery transfer phases so that different protocols may be used for each phase. For the initial transfer phase Marchand Paragraph 60 disclosed existing broadcast/multicast protocol which cannot guarantee that all nodes will contain copy of the replicated file and is a non-reliable multicast transmission protocol. The second phase is the recovery transfer phase which is performed using the symmetric-connectionless file transfer protocol by Marchand which is a reliable multicast protocol.

Marchand disclosed (re. Claim 1) multicasting the plurality of packets to multiple client devices including the first client device (Marchand- Paragraph 50-Paragraph 53, Paragraph 57) *using a first transmission protocol that comprises a non-reliable multi-cast transmission protocol (Marchand-Paragraph 24, Paragraph 60 existing broadcast/multicast protocol which cannot guarantee that all nodes will contain copy of the replicated file)* and requesting, when the first client has completed download of the file, using a reliable protocol with a second client device from the multiple client devices packets not received by the second client device (Marchand- Paragraph 50-Paragraph 53, Paragraph 57, Paragraph 64) wherein the request utilizes a reliable protocol. (Marchand- Paragraph 55, symmetric-connectionless file transfer protocol)

Marchand Paragraph 55 disclosed sending a request using a multicasting protocol which is a reliable protocol for determining which file transfers occurred while the requesting slave process was non-operational.

Bailey and Marchand are analogous art because they present concepts and practices regarding data transfer using TFTP. At the time of the invention it would have been obvious to combine Marchand into Bailey. The motivation for said combination would have been to enable a connectionless model where, without any preceding protocol exchange, file fragments can be exchanged among cooperating processes. (Marchand-Paragraph 53)

Claim 7 (re. computer readable medium) is rejected on the same basis as Claim 1.

Claim 13 (re. a system) is rejected on the same basis as Claim 1.

The motivation to combine described in Claim 1 applies to Claims 7,13.

Bailey-Marchand disclosed (re. Claim 2,8,14) wherein the multicasting of the plurality of packets comprises multicasting to the multiple clients using a multicast Trivial File Transfer Protocol (TFTP). (Bailey-Column 3 Lines 25-45, Column 4 Lines 5-15)

The motivation to combine described in Claim 1 applies to Claims 2,8,14.

Bailey-Marchand disclosed (re. Claim 3,9,15) wherein the reliable protocol comprises a Trivial File Transfer Protocol (TFTP). (Bailey-Column 3 Lines 25-45, Column 4 Lines 5-15)

The motivation to combine described in Claim 1 applies to Claims 3,9,15.

Bailey-Marchand disclosed (re. Claim 4,10,16) wherein the download of the file occurs during a pre-boot phase of the first client device. (Bailey-Fig. 13a-Fig. 13d, Column 11 Lines 45-55)

The motivation to combine described in Claim 1 applies to Claims 4,10,16.

Bailey-Marchand disclosed (re. Claim 5,11,17) wherein the file comprises a boot image for the first client device. (Bailey-Fig. 13a-Fig. 13d, Column 11 Lines 45-55)

The motivation to combine described in Claim 1 applies to Claims 5,11,17.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6,12, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bailey (US Patent 6185623) further in view of Marchand (US Publication 2008/0168157) further in view of Riedle (US Patent 6983334).

While Bailey-Marchand substantially disclosed the claimed invention Bailey-Marchand did not disclose (re. Claim 6,12,18) wherein the second client device tracks packet gaps within the requested file and the size of the packet gaps during the

multicast of the file.

Riedle disclosed (re. Claim 6,12,18) wherein the second client device tracks packet gaps within the requested file and the size of the packet gaps during the multicast of the file. (Riedle-Column 5 Lines 5-15, 'array holes', Column 8 Lines 30-45, Column 9 Lines 50-65)

Bailey, Marchand and Riedle are analogous art because they present concepts and practices regarding data transfer using TFTP. At the time of the invention it would have been obvious to combine Riedle into Bailey-Marchand. The motivation for said combination would have been to enable efficiently tracking lost packets of a file being transferred on a multicast network to a receiving client where the tracking system is dynamically scalable to accommodate extremely large files. (Riedle-Column 4 Lines 45-55)

Conclusion

Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing

responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GREG BENGZON whose telephone number is (571)272-3944. The examiner can normally be reached on Mon. thru Fri. 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Vaughn can be reached on (571)272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Greg Bengzon/

Examiner, Art Unit 2444